

- 4 -

activity is between thirty(30) minutes and six(6) hours.

14. [Amended] A method according to claim 1 wherein said cereal feed ingredient is one or a combination of canola meal, rye, barley, wheat, sorghum, triticale, oats, or feather meal, said liquid hydrolysate is a fish or krill based hydrolysate and said enzyme is one of a combination of hemicellulases, cellulases, xylanases, glucanases, amylases, proteases or a further fiber degrading enzyme.

~~Amend claim 15 as follows:~~

15. [Amended] A product produced by any one of the methods of claims 1-14.

REMARKS

Claims 1-15 have been amended to meet the Examiner's objections under 35 U.S.C. 112, second paragraph. Claims 1-15 remain in this application and stand for examination. Reconsideration and reexamination are requested in view of the foregoing amendments and the comments made hereinafter.

Rejection of claims 1-15 for obviousness

The Examiner rejects claims 1-15 under 35 U.S.C. 103(a) as being unpatentable over Document WO 98/34498 and Stone et al (J. Sci. Food Agric.) in view of EP 0321004 and Neilsen et al United States Patent 5,989,600.

- 5 -

The '498 document cited by the Examiner is well known to the applicant and indeed, the technology there disclosed is commonly owned by the applicant of the present case. The '498 document teaches, inter alia, a feed product which is made by adding krill hydrolysate to dry carrier and co-drying the mixture. It does not teach adding a known and predetermined enzyme to the mixture of liquid hydrolysate and cereal feed other than the addition of wheat bran which can provide phytase while the mixture is in liquid form which phytase will be needed if canola meal and krill are mixed. Further, there is no disclosure of acid stabilisation as the Examiner correctly notes.

Stone et al, cited by applicant in its' 37CFR 1.56 filing and discussed in the specification at page 3, lines 109 of the present application, do not assist the '498 document in reaching the invention. Stone et al simply do not teach adding a phytase enzyme other than a natural source. Similarly EP 0321004, cited in applicant's 37 CFR 1.56 filing, does not teach the addition of a phytase to a combination of liquid hydrolysate and cereal feed mixture. Nielsen et al '600 do not teach the addition of enzymes to a krill hydrolysate and cereal feed liquid mixture. Accordingly, claims 1 through 14 are not rendered obvious by any of the cited references taken singly or in combination and continue to define patentable subject matter. Reconsideration is requested.

Rejection of claim 15 for anticipation and/or obviousness

The Examiner rejects claim 15 under 35 U.S.C. 102(b) as being anticipated by or rendered obvious aforementioned

- 6 -

WO98/34498 or aforementioned Stone et al or Document EP 0286056 or Vanderbeke et al United States Patent 5,554,399 or aforementioned Nielsen et al United States Patent 5,989600 or Document WO 00/10404 or aforementioned EP0321004.

The product according to the invention, however, is produced by the method set forth in process claims 1-14. But the Examiner refers to the addition of phytase to hydrolyze the same feed materials. Phytase is added to the mixture of hydrolysate and cereal feed but only after the two components are mixed together to form a liquid mixture. The aforementioned documents cited by the Examiner teach only the addition of a phytase and do not disclose the reason for adding the phytase which is added in order to remove the bound phosphorous from the phytic acid in the cereal feed and thereby allow the phytate bound phosphorous to be removed which objective is desirable as related in the specification. The Examiner's comments relating to the burden being placed on applicant is noted but, with respect, it is submitted that this burden is now reduced or eliminated by the aforementioned explanation which clearly distinguishes the product claimed over any product which might be made by the cited references.

The remaining references are noted.

Today's paper is accompanied by a marked up version of the claims which is attached and which is entitled "VERSION WITH MARKINGS TO INDICATE CHANGES MADE".

In view of the above, reconsideration and withdrawal of

- 7 -

the rejections and objections is requested and allowance of this application is respectfully solicited.

Respectfully submitted,

BIOZYME SYSTEMS INC.

Per: _____

John R. Uren
Regn. 27,530

Date: November 8, 2002

John Russell Uren, P.Eng.
Suite 202, 1590 Bellevue Avenue
West Vancouver, Canada V7V1A7

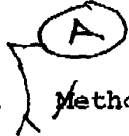



Telephone: (604) 922-2997 (West Vancouver, Canada)
(360) 945-3411 (Washington State)

bio76701.wpd

VERSION WITH MARKINGS TO INDICATE
CHANGES MADE

- 10 -

I CLAIM:

1.  Method of adding a cereal feed ingredient to a liquid hydrolysate, adjusting the pH and temperature of the mixture of said cereal feed ingredient and said liquid hydrolysate in accordance with the optimal enzymatic activity using a predetermined enzyme, adding said predetermined enzyme to said mixture, maintaining said enzymatic activity within said mixture for a predetermined time period under said adjusted pH and temperature conditions to obtain a release of phosphorous from said cereal feed ingredient, stabilising said mixture to prevent bacteria formation and preserving said stabilised mixture as a feed ingredient.
2.  Method as in claim 1 wherein said mixture is acid stabilised.
3.  Method as in claim 1 wherein said mixture is stabilised by drying.
4.  Method as in claim 1 wherein said stabilised mixture is dried.

- 11 -

5. ^(A) Method as in claim 3 wherein said mixture is dried by codrying onto a further feed ingredient.

6. ^(A) Method as in claim 4 wherein said mixture is dried by codrying onto a further feed ingredient.

5 7. ^(A) Method as in claim 1 wherein said cereal feed ingredient is canola meal, sorghum, soybean meal, triticales, barley, peas, oats, wheat and/or rye.

8. ^(A) Method as in claim 1 wherein said enzyme is a commercially available enzyme.

10 9. ^(A) Method as in claim 8 wherein said commercially available enzyme is a phytase.

10. ^(A) Method as in claim 1 wherein said enzyme is a phytase, said pH is adjusted between 5-5.5 and said temperature is adjusted between 50-55 deg.C.

15 11. ^(A) Method as in claim 10 wherein said predetermined period is between thirty(30) minutes and six(6) hours.


- 12 -

12. Method as in claim 1 wherein said enzyme is one or a combination of phytases, hemicellulases, cellulases, xylanases, glucanases, amylases, proteases ~~and~~ or other fiber degrading enzymes.

5 13. Method according to claim 1 wherein said cereal feed ingredient is one or a combination of canola meal, triticale, rye, sorghum, barley, oats or wheat, said liquid hydrolysate is a fish or krill based hydrolysate, said predetermined enzyme is a phytase, said pH is adjusted to
10 between 5 and 5.5, said temperature is adjusted between 50 and 55 deg.C. and said predetermined time period for maintaining said enzymatic activity is between thirty(30) minutes and six(6) hours.

15 14. Method according to claim 1 wherein said cereal feed ingredient is one or a combination of canola meal, rye, barley, wheat, sorghum, triticale, oats, or feather meal, said liquid hydrolysate is a fish or krill based hydrolysate and said enzyme is one of a combination of hemicellulases, cellulases, xylanases, glucanases, amylases, proteases or a
20 further fiber degrading enzyme.

- 13 -

15.  Product produced by any one of the methods of claims 1-14.